

RECONFIGURABLE LOGIC FOR SIMULATING STOCHASTIC DISCRETE EVENTS

Abstract of the Disclosure

5 A system and method for simulating the system dynamics of a stochastic
discrete-event system. In one application, the present invention can be used to simulate
molecular signaling processes in biological cells, at speeds that are orders of magnitude
faster than what can be done on general-purpose computer processing units. Existing
simulators are reported to simulate such processes at speeds on the order of 10^5 events
per second. Using this invention, the simulator can achieve simulations of more than 10^7
10 events per second with current generation programmable devices that operate at clock
speeds of 10^8 cycles per second.